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1990

Nebraska Summary: S123 Massey Ferguson 3140

Nebraska Tractor Test Laboratory

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SUMMARY OF OECD TESTS 1253 & 1254—NEBRASKA SUMMARY 123

MASSEY FERGUSON 3140 DIESEL (2WD & FWA)

16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Fuel Consumption			Mean Atmospheric Conditions
		Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1101 rpm)					
115.8 (86.4)	2202	6.39 (24.17)	0.393 (0.239)	18.12 (3.57)	
Standard Power Take-off Speed (1001 rpm)					
111.4 (83.1)	2002	5.87 (22.23)	0.375 (0.228)	18.98 (3.74)	Air temperature
VARYING POWER AND FUEL CONSUMPTION					
115.8 (86.4)	2202	6.39 (24.17)	0.393 (0.239)	18.12 (3.57)	73°F (23°C)
99.2 (74.0)	2220	5.65 (21.39)	0.404 (0.246)	17.56 (3.46)	Relative humidity
74.8 (55.8)	2238	4.68 (17.73)	0.446 (0.271)	15.99 (3.15)	38%
50.4 (37.6)	2252	3.68 (13.94)	0.519 (0.316)	13.70 (2.70)	Barometer
25.1 (18.7)	2264	2.65 (10.03)	0.753 (0.458)	9.47 (1.86)	29.83" Hg (101.0 kPa)
.....	2280	1.77 (6.71)	

Maximum Torque 336.1 lb. ft (455.7 Nm) at 1299 RPM
Maximum Torque Rise 21.7%

DRAWBAR PERFORMANCE

FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—9th (1R) Gear									
105.7 (78.8)	6540 (29.1)	6.06 (9.75)	2188	6	0.441 (0.268)	16.24 (3.20)	180 (82)	45 (7)	29.9 (101.4)
75% of Pull at Maximum Power—9th (1R) Gear									
81.1 (60.5)	4780 (21.3)	6.36 (10.23)	2234	4	0.483 (0.294)	14.77 (2.91)	180 (82)	45 (7)	29.9 (101.4)
50% of Pull at Maximum Power—9th (1R) Gear									
58.3 (43.5)	3370 (15.0)	6.49 (10.44)	2248	2	0.536 (0.326)	13.35 (2.63)	180 (82)	45 (7)	29.9 (101.4)
75% of Pull at Reduced Engine Speed—10th (1R+S) Gear									
82.3 (61.4)	4855 (21.6)	6.36 (10.24)	1774	4	0.422 (0.257)	16.90 (3.33)	180 (82)	45 (7)	29.9 (101.4)
50% of Pull at Reduced Engine Speed—10th (1R+S) Gear									
60.3 (45.0)	3485 (15.5)	6.49 (10.44)	1776	2	0.450 (0.274)	15.84 (3.12)	180 (82)	45 (7)	29.9 (101.4)
MAXIMUM POWER IN SELECTED GEARS									
6th (3T+S) Gear									
89.5 (66.8)	9230 (41.1)	3.64 (5.85)	2216	15	0.515 (0.313)	13.86 (2.73)	180 (82)	45 (7)	29.9 (101.4)
7th (4T) Gear									
100.0 (74.6)	8610 (38.3)	4.36 (7.01)	2188	11	0.470 (0.286)	15.18 (2.99)	180 (82)	45 (7)	29.9 (101.4)
8th (4T+S) Gear									
102.7 (76.6)	6675 (29.7)	5.77 (9.29)	2190	7	0.455 (0.277)	15.68 (3.09)	180 (82)	45 (7)	29.9 (101.4)
9th (1R) Gear									
105.7 (78.8)	6540 (29.1)	6.06 (9.75)	2188	6	0.441 (0.268)	16.24 (3.20)	180 (82)	45 (7)	29.9 (101.4)
10th (1R+S) Gear									
105.1 (78.4)	5055 (22.5)	7.80 (12.55)	2178	4	0.439 (0.267)	16.24 (3.20)	180 (82)	45 (7)	29.9 (101.4)
11th (2R) Gear									
105.7 (78.8)	4210 (18.7)	9.42 (15.16)	2176	2	0.442 (0.269)	16.14 (3.18)	180 (82)	45 (7)	29.9 (101.4)

Location of Test: Groupement Antony, BP 121
92164 Antony, France

Dates of Test: November 1989 to January 1990

Manufacturer: MASSEY FERGUSON S.A. Ave-
nue Blaise Pascal B.P. 307 60026 Beauvais, France

FUEL AND OIL: Fuel No. 2 Diesel Cetane No.
NA Specific gravity converted to 60°/60°F (15°/
15°C) 0.855 Fuel weight 7.13 lbs/gal (0.853 kg/l)
Oil SAE 10W30 Oil consumption for 10 hours
NA Transmission and hydraulic lubricant B. P.
Agrotrans SAE 80W90 API GL-4 Front axle
lubricant B. P. Agrotrans SAE80W90 API GL-4

ENGINE: Make Perkins Diesel Type six cylin-
der vertical with turbocharger Serial No. YB 31228
U 505951 Crankshaft lengthwise Rated engine
speed 2200 Bore and stroke 3.937" × 5.00" (100
mm × 127 mm) Compression ratio 16.0 to 1 Dis-
placement 365 cu in (5985 ml) Starting system 12
volt Lubrication pressure Air cleaner two paper
elements and aspirator Oil filter two full flow car-
tridges Oil cooler engine coolant heat exchanger
for crankcase oil Fuel filter two paper elements
Muffler underhood Exhaust vertical Cooling me-
dium temperature control thermostat and varia-
ble speed fan

CHASSIS: Type 2WD and FWA Serial No. N
104 005 Tread width rear 62.5" (1588 mm) to 85.8"
(2180 mm) front 2WD - 60.7" (1543 mm) to 91.9"
(2333 mm) FWA - 66.4" (1686 mm) to 85.5" (2171
mm) Wheel base 106.2" (2697 mm) Hydraulic con-
trol system direct engine drive Transmission
selective gear fixed ratio with partial (2) range op-
erator controlled powershift Nominal travel speeds
mph (km/h) first 1.58 (2.55) second 2.00 (3.22) third
2.39 (3.85) fourth 3.02 (4.87) fifth 3.31 (5.33) sixth
4.18 (6.73) seventh 4.79 (7.71) eighth 6.06 (9.75)
ninth 6.35 (10.22) tenth 8.03 (12.92) eleventh 9.59
(15.44) twelfth 12.12 (19.51), thirteen 13.27
(21.36) fourteenth 16.78 (27.00) fifteenth 20.56
(33.09) sixteenth 24.29 (39.09) reverse 1.57 (2.53),
1.99 (3.20), 2.38 (3.83), 3.01 (4.84), 3.29 (5.30),
4.16 (6.69), 4.76 (7.67), 6.02 (9.69), 6.31 (10.16),
7.98 (12.84), 9.54 (15.35), 12.05 (19.40), 13.20
(21.24), 16.68 (26.84), 19.11 (30.75), 24.15 (38.86)
Clutch dry single disc operated by foot pedal Brakes
single wet disc hydraulically actuated by two foot
pedals that can be locked together Steering hy-
drostatic Power take-off 540 rpm at 1980 engine
rpm and 1000 rpm at 2000 engine rpm Unladen
tractor mass 2WD - 10430 lb (4730 kg), FWA -
11495 lb (5215 kg)

TRACTOR SOUND LEVEL WITH CAB	2WD dB(A)	FWA dB(A)
Gear closest to 4.7 mph (7.5 km/h) 7th (4T) gear	74.0	75.0
Maximum sound level in 12th (2R+S) gear	76.0	76.0
Transport speed—no load 16th (4R) gear	72.0	72.0
Bystander in 16th (4R) gear	85.0	86.0

TIRES AND WEIGHT		Tested Without Ballast	
Rear Tires	—No., size, ply & psi (kPa)	Front Wheel Assist	2WD
Front Tires	—No., size, ply & psi (kPa)	Two 14.9-28; 8; 16 (110)	Two 20.8-38; 8; 14 (100)
Height of Drawbar		22.8 in (578 mm)	32.3 in (820 mm)
Static Weight with Operator—Rear		7035 lb (3190 kg)	6935 lb (3145 kg)
—Front		4630 lb (2100 kg)	3660 lb (1660 kg)
—Total		11665 lb (5290 kg)	10595 lb (4805 kg)

THREE POINT HITCH PERFORMANCE (OECD STATIC TEST)

CATEGORY: II

Quick Attach: None

Maximum Force Exerted Through Whole Range:

9800 lbs (43.6 kN)

i) Opening pressure of relief valve:

NA

Sustained pressure of the open relief valve:

2790 psi (192 bar)

ii) Pump delivery rate at minimum pressure:

13.3 GPM (50.3 l/min)

iii) Pump delivery rate at maximum hydraulic power:

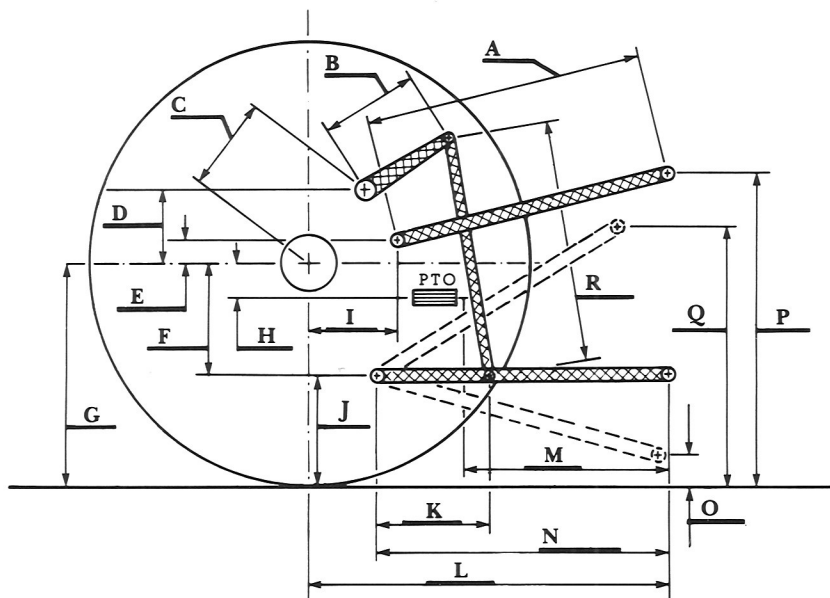
12.6 GPM (47.8 l/min)

Delivery pressure:

2610 psi (180 bar)

Power:

19.2 Hp (14.3 kW)



HITCH DIMENSIONS AS TESTED—NO LOAD

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. The performance figures on this summary were taken from a test conducted under the OECD Code II restricted standard test code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report Nos. **1253 & 1254**, Nebraska Summary 123, January 29, 1993.

LOUIS I. LEVITICUS

Engineer-in-Charge

L. L. BASHFORD

R. D. GRISSO

K. VON BARGEN

Board of Tractor Test Engineers

	inch	mm
A	28.3	720
B	11.6	295
C	13.9	354
D	13.0	330
E	7.9	200
F	11.0	280
G	33.6	855
H	1.7	43
I	15.0	382
J	22.6	575
K	25.6	650
L	43.3	1101
M	25.6	651
N	37.0	940
O	8.1	205
P	42.7	1085
Q	30.2	768
R	32.6	827

The following performance figures apply to the tractor equipped with a Front Drive Axle.

**DRAWBAR PERFORMANCE
FUEL CONSUMPTION CHARACTERISTICS
(Front Drive Engaged)**

Power Hp (kW)	Drawbar pull (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp. °F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—9th (1R) Gear									
100.9 (75.2)	6105 (27.2)	6.20 (9.97)	2170	3	0.449 (0.273)	15.89 (3.13)	181 (83)	61 (16)	30.3 (102.5)
75% of Pull at Maximum Power—9th (1R) Gear									
80.1 (59.7)	4655 (20.7)	6.45 (10.38)	2226	2	0.490 (0.298)	14.57 (2.87)	180 (82)	61 (16)	30.3 (102.5)
50% of Pull at Maximum Power—9th (1R) Gear									
52.7 (39.3)	2990 (13.3)	6.61 (10.63)	2246	1	0.584 (0.355)	12.23 (2.41)	180 (82)	61 (16)	30.3 (102.5)
75% of Pull at Reduced Engine Speed									
Available gear ratios did not permit running of this test									
50% of Pull at Reduced Engine Speed—10th (1R+S) Gear									
54.5 (40.6)	3085 (13.7)	6.62 (10.66)	1782	1	0.473 (0.288)	15.08 (2.97)	180 (82)	61 (16)	30.3 (102.5)
MAXIMUM POWER IN SELECTED GEARS									
5th (3T) Gear									
83.0 (61.9)	10745 (47.8)	2.90 (4.66)	2216	15	0.529 (0.322)	13.45 (2.65)	181 (83)	61 (16)	30.3 (102.5)
6th (3T+S) Gear									
96.3 (71.8)	9240 (41.1)	3.91 (6.29)	2196	9	0.480 (0.292)	14.87 (2.93)	181 (83)	61 (16)	30.3 (102.5)
7th (4T) Gear									
98.3 (73.3)	8005 (35.6)	4.60 (7.41)	2198	6	0.467 (0.284)	15.23 (3.00)	180 (82)	61 (16)	30.3 (102.5)
8th (4T+S) Gear									
99.2 (74.0)	6270 (27.9)	5.93 (9.55)	2190	4	0.462 (0.281)	15.48 (3.05)	181 (83)	61 (16)	30.3 (102.5)
9th (1R) Gear									
100.9 (75.2)	6105 (27.2)	6.20 (9.97)	2170	3	0.449 (0.273)	15.89 (3.13)	181 (83)	61 (16)	30.3 (102.5)
10th (1R+S) Gear									
100.3 (74.8)	4720 (21.0)	7.97 (12.83)	2180	2	0.452 (0.275)	15.79 (3.11)	180 (82)	61 (16)	30.3 (102.5)
11th (2R) Gear									
100.4 (74.9)	3935 (17.5)	9.57 (15.40)	2172	2	0.449 (0.273)	15.89 (3.13)	181 (83)	61 (16)	30.3 (102.5)